

## **REMARKS**

### **I. Introduction**

Claims 1-28 and 30-40 are currently pending in the present application after cancellation of claim 29 and addition of new claims 35-40. Claims 6-28 and 32-33 are withdrawn from further consideration. Accordingly, claims 1-5, 30-31 and 34-40 are currently under consideration. Claims 1 and 30-31 have been amended. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all pending claims under consideration are in allowable condition.

Applicants note with appreciation the acknowledgement of the claim for foreign priority and the acknowledgment that all certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

### **II. Information Disclosure Statement**

The Examiner has indicated that the following documents listed in the Information Disclosure Statement were not considered because English translations were not provided: JP 10 12341 and the article "Optische Grundgesetze" by H. J. Tiziani. Applicants will provide English translations of these foreign language documents as soon as they are obtained by Applicants.

### **III. Drawings & Specification**

In response to the Examiner's objection to the drawings, Applicants have made appropriate amendments to the Specification to obviate the objection, i.e., reference numerals P1, P2 and 66 have been omitted from the description. Therefore, Applicants request withdrawal of the objection to the drawings.

Additional changes to the Specification have been made to correct minor errors. The specific supports for the changes made are discussed in detail below:

The changes made to the paragraph beginning on p. 86, line 17, i.e., "HH2 is the principal point spacing (mm) of the positive lens in the second lens group, and  $\Phi_1$   $\Phi_2$  is the refracting power of the positive lens in the second lens group," are fully supported by the original disclosure on p. 32, l. 15-17.

The changes made to the paragraph beginning on p. 124, line 1, i.e., “lens group G2 has generally negative power, and is composed of, in order from its object side, ~~a double-convex positive lens~~ a double-concave negative lens and a positive meniscus lens concave on its image side,” are fully supported by the original disclosure on p. 152 and Figs. 49(a)-49(c).

The changes made to the paragraph beginning on p. 124, line 13, i.e., “fourth lens group G4 has positive power, and consists of a positive meniscus lens concave on its image side,” are fully supported by the original disclosure on p. 152 and Figs. 49(a)-49(c).

The changes made to the paragraph beginning on p. 166, line 2, i.e., “object image received at the image pickup device chip 162 is entered via a terminal ~~[[66]]~~ 166 in the processing means of the personal computer 300,” are fully supported by the original disclosure on p. 167, l. 26-27.

#### **IV. Rejection of Claims 1, 5 and 29-31 under 35 U.S.C. § 103(a)**

Claims 1, 5 and 29-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,671,062 ("Nakamura") in view of U.S. Patent 2,908,209 ("Marvin"). Claim 29 has been canceled, and claims 30 and 31 have been amended to depend on claim 1. Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A.

1974). To the extent the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art.” (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Amended claim 1 recites, in relevant parts, a “zoom optical system comprising, in order from an object side thereof, a first lens group having positive refracting power, a second lens group having negative refracting power, a third lens group having positive refracting power and a fourth lens group having positive refracting power, wherein at least one lens is formed by molding of a first lens blank that provides a surface including at least an optical function surface after molding, and a second lens blank that provides a surface other than said surface including at least an optical function surface after molding, wherein the first lens blank and the second lens blank are integrated into a one-piece lens, and said second lens group or said fourth lens group includes at least one said one-piece lens.” The amended language is fully supported by the original disclosure, e.g., on p. 80, l. 10-13; p. 85, l. 16-17; and p. 92, l. 22-23.

Nakamura (US5671062) reference discloses a basic optical arrangement of a zoom lens, including: successively arranged in the order named from an object side to an image side, a first lens group 1 having a positive refracting power, a second lens group 2 having a negative refracting power, a third lens group 3 having a positive refracting power, and a fourth lens group 4 having a positive refracting power.” The secondary Marvin (US2908209) reference discloses a lens focusing mechanism for cameras, including: lenses 50, 51, and 52; and a barrel portion 53 preferably integral with lens 50, wherein the barrel portion 53 has three radially extending arms 58, and the radially extending arms are molded as integral parts of the lens.”

The present claimed invention of claim 1 specifically recites that “said second lens group or said fourth lens group includes at least one said one-piece lens.” In contrast, Nakamura does not teach or suggest the incorporation of the one-piece lens, let alone teach or suggest which of a plurality of lens groups of the zoom lens includes a one-piece lens. Furthermore, although the secondary Marvin reference discloses that the radially extending arms are molded as integral parts of the lens, Marvin clearly does not teach or suggest any

zoom optical system, let alone suggest that the optical system includes a plurality of lens groups. Accordingly, Marvin clearly does not teach or suggest the application of the lens having radially extending arms to the lens groups in the zoom optical system, let alone teach or suggest which of the lens groups of the optical system includes a one-piece lens.

In view of the above, it is clear that the overall teachings of Nakamura and Marvin fail to teach or suggest the claimed feature that "said second lens group or said fourth lens group includes at least one said one-piece lens," as recited in claim 1. Therefore, claim 1 and its dependent claims 5 and 30-31 are patentable over the combination of Nakamura and Marvin. Withdrawal of the obviousness rejection is respectfully requested.

**V. Rejection of Claim 2 under 35 U.S.C. § 103(a)**

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,671,062 ("Nakamura") in view of U.S. Patent 2,908,209 ("Marvin") and in further view of Nakano (JP 2003-248106). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 2 depends on claim 1. As discussed above, the overall teachings of Nakamura and Marvin clearly do not render parent claim 1 obvious. In addition, the teachings of Nakano clearly do not remedy the deficiencies of Nakamura and Marvin as applied against parent claim 1. For at least the foregoing reasons, dependent claim 2 is patentable over the combination of Nakamura, Marvin and Nakano. Withdrawal of the obviousness rejection is respectfully requested.

#### **VI. Rejection of Claim 3 under 35 U.S.C. § 103(a)**

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,671,062 ("Nakamura") in view of U.S. Patent 2,908,209 ("Marvin") and in further view of U.S. Patent 5,812,317 ("Billingsley"). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 3 depends on claim 1. As discussed above, the overall teachings of Nakamura and Marvin clearly do not render parent claim 1 obvious. In addition, the teachings of Billingsley clearly do not remedy the deficiencies of Nakamura and Marvin as applied against parent claim 1. For at least the foregoing reasons, dependent claim 3 is patentable over the

combination of Nakamura, Marvin and Billingsley. Withdrawal of the obviousness rejection is respectfully requested.

#### **VII. Rejection of Claim 4 under 35 U.S.C. § 103(a)**

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,671,062 ("Nakamura") in view of U.S. Patent 2,908,209 ("Marvin") and in further view of U.S. Patent 6,107,396 ("Kweon"). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 4 depends on claim 1. As discussed above, the overall teachings of Nakamura and Marvin clearly do not render parent claim 1 obvious. In addition, the teachings of Kweon clearly do not remedy the deficiencies of Nakamura and Marvin as applied against parent claim 1. For at least the foregoing reasons, dependent claim 4 is patentable over the combination of Nakamura, Marvin and Kweon. Withdrawal of the obviousness rejection is respectfully requested.

#### **VIII. Rejection of Claim 5 under 35 U.S.C. § 103(a)**

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,671,062 ("Nakamura") in view of U.S. Patent 2,908,209 ("Marvin") and in further view of U.S. Patent 6,535,504 ("Yamamoto"). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 5 depends on claim 1. As discussed above, the overall teachings of Nakamura and Marvin clearly do not render parent claim 1 obvious. In addition, the teachings of Yamamoto clearly do not remedy the deficiencies of Nakamura and Marvin as applied against parent claim 1. For at least the foregoing reasons, dependent claim 5 is patentable over the combination of Nakamura, Marvin and Yamamoto. Withdrawal of the obviousness rejection is respectfully requested.

#### **IX. Rejection of Claim 34 under 35 U.S.C. § 103(a)**

Claim 34 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,671,062 ("Nakamura") in view of U.S. Patent 2,908,209 ("Marvin") and in further view of U.S. Patent 5,541,656 ("Kare"). Applicants respectfully submit that the rejection should be

withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art.” (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 34 depends on claim 1. As discussed above, the overall teachings of Nakamura and Marvin clearly do not render parent claim 1 obvious. In addition, the teachings of Kare clearly do not remedy the deficiencies of Nakamura and Marvin as applied against parent claim 1. For at least the foregoing reasons, dependent claim 34 is patentable over the combination of Nakamura, Marvin and Kare. Withdrawal of the obviousness rejection is respectfully requested.

#### **X. New Claims 35-40**

Newly added claims 35 and 36 depend on claim 1; newly added claims 37-40 are independent claims.

The subject matter of new claim 35 is fully supported by the original specification, e.g., at page 90, lines 20-26.

The subject matter of new claim 36 is fully supported by the original specification,



e.g., at page 93, lines 6-12.

The subject matter of new claim 37 is fully supported by the original specification, e.g., at page 13, lines 14-23; page 80, lines 10-13; and page 83, lines 12-18.

The subject matter of new claim 38 is fully supported by the original specification, e.g., at page 13, lines 14-23; page 80, lines 10-13; page 86, lines 21-23; and page 87, line 26 – page 88, line 2.

The subject matter of new claim 39 is fully supported by the original specification, e.g., at page 13, lines 14-23; page 80, lines 10-13; and page 90, lines 20-26.

The subject matter of new claim 40 is fully supported by the original specification, e.g., at page 13, lines 14-23; page 80, lines 10-13; and page 93, lines 6-12.

Applicants respectfully submit that newly added claims 35-40 are allowable over the cited prior art references.

## **XI. CONCLUSION**

In light of the foregoing, it is respectfully submitted that all of the presently pending claims under consideration are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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